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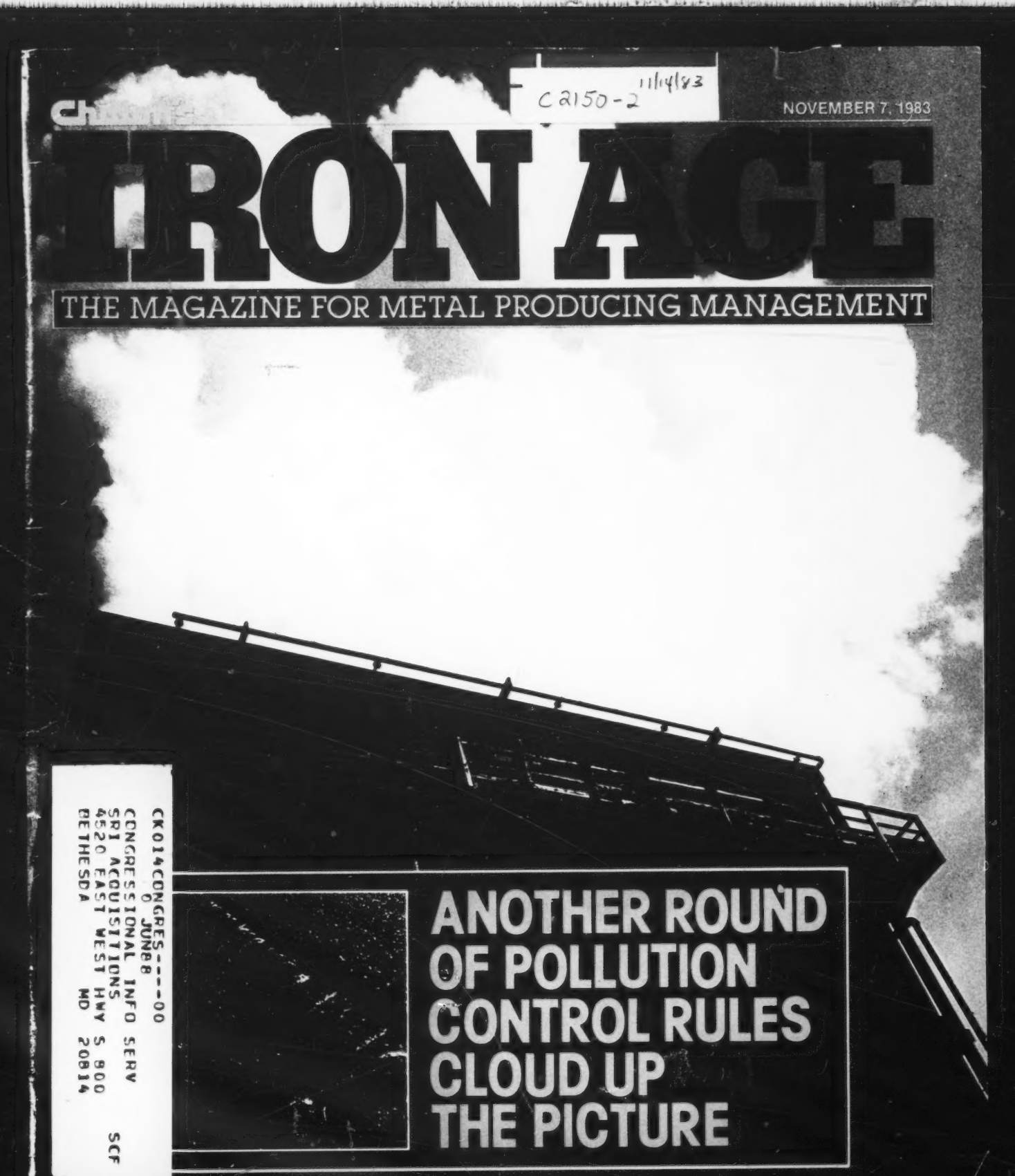
NOVEMBER 7, 1983

IRON AGE

THE MAGAZINE FOR METAL PRODUCING MANAGEMENT



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ANOTHER ROUND OF POLLUTION CONTROL RULES CLOUD UP THE PICTURE

U.S. STEEL'S GARY WORKS SCORES BIG IN PRODUCTIVITY

WEIRTON BEGINS TO PICK ITSELF UP

STEEL SHAKES THE MONEY TREE FOR STEEL EQUIPMENT

VOL. 226, NO. 27

IRON AGE

NOVEMBER 7, 1983

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METALWORKING PRICE TRENDS

Prices' modest rise shows the economy turning up gradually

Producer prices continue to edge upward.

Prices overall advanced 0.2 pct in September, midway between August's 0.4 pct rise and July's 0.1 pct increase.

Declining costs for new cars and gasoline cancelled out most of the sharp increases in food prices, the Bureau of Labor Statistics said.

This does not necessarily mean that auto prices dropped during the month. Instead, consumers reportedly are unable to obtain bigger cars, which are selling well, and are opting for smaller, low-priced vehicles.

The finished goods price index for September was 285.1, equivalent to a cost of $2,851 for goods that cost business $1,000 in 1967. This was a 0.4 pct decline before seasonal adjustment. From September 1982 to last September, the finished goods price index has moved up 1.4 pct.

The index for factory, construction and other capital equipment dropped 0.3 pct in price after rising 0.7 pct in August. Accounting for 22.5 pct of the producer price index, capital equipment prices are a primary influence on the cost of doing business in the long run and a decline is good news for companies trying to expand to keep pace with economic recovery.

Sharp declines were registered for passenger cars and light motor trucks, mostly the result of end-of-model-year allowances and other incentives to help dealers liquidate inventories. This is considered an unusual event compared with normal conditions.

The index for capital equipment moved down 0.3 pct after increasing 0.7 pct in August. The downturn was predominantly the result of sharp declines in the prices for heavy trucks and other motor vehicles. Prices for machine tools, oil field and gas field machinery and mining machinery were slightly lower.

A look at the figures shows that in September, compared with the previous month, 12 price categories went up, eight went down and two showed no change. But if the aberrative behavior of the motor vehicle segment of the economy is removed, the other 19 listed metalworking product lines showed little or no change in prices compared with the previous month.

Also, for 21 product lines shown—excepting valves and fittings, for which no figures are available—the average increase was only 2 pct.

Latest Month Covered: September, 1983

Products	Index Reading For Month (1967 = 100)	Pct Change From Previous Month	Pct Change From Year-Ago Month
Metal Cutting Machine Tools	377.5	+ 0.1	+ 1.7
Metal Forming Machine Tools	415.5	− 0.2	+ 1.3
Agricultural Machinery & Equip.	328.0	+ 0.3	+ 4.2
Construction Machinery & Equip.	353.4	+ 0.2	+ 1.7
Industrial Process Furnace & Ovens	362.7	+ 0.1	+ 2.1
Industrial Material Handling Equip.	285.3	+ 0.1	− 0.1
Pumps, Compressors & Allied Equip.	345.8	+ 0.1	− 0.7
Fluid Power Equip. (Dec. 1970 = 100)	253.8	+ 0.1	+ 2.9
Mechanical Power Transmission Equip.	315.6	+ 0.2	+ 0.1
Automobiles	208.0	− 4.8	+ 4.1
Motor Trucks—Light	255.2	− 5.6	− 0.6
Motor Trucks—Heavy	301.2	− 4.8	+ 4.1
Railroad Equipment	357.5	− 0.1	+ 2.1
Fabricated Metal Structural Products	303.8	+ 0.3	− 0.8
Electric Motors	334.0	+ 0.1	+ 7.3
Valves (Metal, Ex-Fluid Power—Dec. 1982=100)	99.5	− 0.3	NA
Ball & Roller Bearings	332.2	+ 0.4	− 0.9
Cutting Tools & Accessories	275.3	+ 0.6	+ 1.3
Heating Equipment	244.7	0	+ 2.3
Plumbing Fixtures & Brass Fittings	291.5	− 0.1	+ 5.2
Metal Containers	338.3	+ 0.1	+ 2.9
Miscellaneous Metal Products	287.7	0	+ 1.4

Data based on U.S. Labor Dept.'s Producer Price Index

STEEL READY TO SHAKE LOOSE MONEY FOR MILL EQUIPMENT

Although modernization is on hold, it won't take much to put plans in motion.

BY GEORGE J. MCMANUS

The pipeline is full," says Charles E. Half, manager of metals sales for Scientific Systems Services, Inc. "All it needs is a little lubricating."

Mr. Half says the steel industry has lined up a lot of modernization projects. Most of these are on hold, he indicates, but it wouldn't take much to shake them loose.

Not everyone would agree with this assessment. There was considerable gloom at the recent convention and exposition of the Association of Iron and Steel Engineers (AISE). The attendance of nearly 17,500 was remarkable for the times, but headlines about more steel cutbacks did nothing to cheer visitors.

It's certainly true, however, that the steel pipeline is filled with new technology. At the AISE show, it was the quality as well as the quantity of innovation that struck people. Coming through the pipeline are such radical departures as continuous steelmaking, horizontal casting, thin slab casting, direct rolling, direct current steelmaking, and plasma refining.

In more conventional areas, big advances are being made in coating processes, measuring devices and control systems. At every step in steel manufacture, there seems to be better ways of doing things.

"The equipment pays for itself in a week," says Mike Brown, vice president and general manager, Land Instruments, Inc. Mr. Brown was talking about Land's new infrared portable thermometer. Capable of accurate readings up to 5,500°F, he said, the unit has given fuel savings of 17 pct or $400,000 a month in one application.

Krupp and ASEA report big savings from their joint development of a direct current, single electrode arc furnace. "The payoff is very short," says Karl Kullenberg, general manager of sales for Krupp's metallurgical plant division.

A 50-ton direct current furnace has been installed at Avesta Jarnverk AB in Sweden. Electrode consumption has been reduced from 10 lbs per metric ton to 4.5 lbs with the direct current design.

Continuous casting is shooting off in a number of new directions. First, there is work on a process that would cast thin slabs. Mannesmann Demag Corp. is working on casting slabs between 1½ to 2 in. thick. With this size, it would be possible to skip part of the strip mill operation.

"As soon as this is developed, I am sure the mini-mills will go into sheet," says Hans Klingelhoefer, executive vice president of Mannesmann Demag Wean.

In a really exotic area, a number of companies are trying to cast sheet thin enough to bypass the strip mill altogether. Mannesmann Demag is shooting for a sheet ¼ to ½ in. thick United States Steel Corp. and National Intergroup, Inc. (formerly National Steel Corp.), are among the others working on the casting of this sheet.

Apart from its effect on processing, the thin steel program could open the door for a complete new field of metallurgy. Rapid solidification of thin material has already produced exceptional properties in electrical steels. Metallurgists look for fast cooling to improve the structures of all grades.

Very much involved in casting technology is Mannesmann Demag Wean, a joint venture of Mannesmann Demag and Wean United, Inc. The new company will engineer and market a line that includes continuous casters, bar mills, and tube mills.

"The biggest advantage we get is the transfer of technology," says George M. Baughman, president of the new affiliate and a long-time officer of Wean United.

Technology is important today, but there is something more important. "Everybody's talking about the financing," says Mr. Klingelhoefer of Mannesmann Demag.

There is no question recent contract awards have hinged on financial terms. Steel companies have been offered unsecured, low interest loans. The continuous casters Voest Alpine is supplying Bethlehem Steel will have payments based on usage.

The Japanese and the Europeans have been giving the most liberal terms. This has had the effect of freezing American builders out of the manufacturing end of the work.

"The biggest problem with financing is that the equipment is restricted to certain countries," says Mr. Klingelhoefer.

The trend is toward a single financial package. Until recently, there were low interest loans for the 'soft' portion of a project—the infrastructure work. Higher rates were charged on the 'hard' or commercial portion.

On recent steel projects in Mexico, no distinction was made between the hard and soft parts. The same treatment is being asked for the Phillipine steel project.

Horizontal continuous casting has reached the commercial stage. At the AISE show, Nippon Kokan displayed its Horicast system. Developed in conjunction with Davy Loewy, this is now being used for billet casting in five plants.

In this country, Armco Inc. is installing a continuous caster of Technica Guss at Baltimore. Voest Alpine and Mannesmann Demag are among the others working on horizontal casters.

This appears to be another development that will initially fit in the mini-mill picture. "I see a future for some special products," says Guenter Wollenweber, manager of continuous casting for Mannesmann Demag Wean.

(Cont. on p. MP-10)

Capital Spending & Material Supply Services

(In Millions of Dollars)

Year	Capital Spending*	Material Supply Services*
1982	$4,219.4	$32,722.1
1981	3,365.3	34,721.9
1980	3,389.6	30,393.7
1979	3,311.9	31,380.4
1978	2,595.2	27,494.5
1977	2,850.3	22,096.4
1976	3,252.9	19,175.7
1975	3,179.4	17,373.6
1974	2,114.7	19,900.3
1973	1,399.9	14,450.5

*1981 and 1982 data represents consolidated reports of steel industry companies who produced 82.1% of the reported raw steel production in 1982.

Source: AISI

By special, Mr. Wollenweber means either expensive alloys or reinforcing steels in limited quantities. He doesn't see the horizontal caster being used for large quantities of billets or slabs.

"The horizontal caster will not replace the tonnage caster," he states.

A dark horse in the horizontal and also the thin slab pictures is the Hazelett strip caster. Widely used in nonferrous work, this proved unsuitable for steel in tests years ago.

Now, a Hazelett research program for steel billets is underway at Krupp in West Germany. There is also said to be a Hazelett steel program in Japan.

Closely tied to continuous casting are direct rolling and hot charging. An AISE paper by Nippon Steel Corp. reported that over 90 pct of the cast slabs at Oita Works are being rolled or charged without conditioning. Nippon Steel attaches considerable importance to the use of a powerful sizing mill at Oita. This is a big help in stabilizing casting operations.

Two of the AISE papers on direct rolling dealt with older plants rather than new ones. Working with ingots, Dofasco, Inc., has long used direct rolling.

The Fairless Works of U.S. Steel was designed for direct rolling, but this practice was used only to a minor extent until recently. When fuel costs zoomed, Fairless returned to non-stop rolling of ingots. For the past year and a half, the plant has direct rolled 80 to 90 pct of its steel.

At one time, there was talk that U.S. Steel would go to continuous casting at Fairless and use soaking pits for partial reheating of thick slabs. The idea died when U.S. Steel added up the cost of modernizing the whole hot end at Fairless.

The obvious advantage of direct rolling (or hot charging) is that it reduces fuel consumption. As the papers brought out, this practice also has the advantage of reducing the gage variations caused by skid marks.

The first tonnage facility designed from scratch for direct rolling will probably be at the Pohang Iron & Steel Co., Ltd., in South Korea. For its big expansion program, Pohang has reportedly specified that the caster must be able to deliver slabs directly to the strip mill. An insulating chamber may be provided to balance temperature, but there will normally be no reheating or conditioning.

Another novel feature reportedly planned for Pohang is the location of the caster at the strip mill rather than in the melt shop. It's a lot easier to transport a ladle of steel than a bunch of individual slabs, says one engineer. This approach might make sense in the U.S. where strip mills and melt shops are often too far apart for direct processing.

With the prospect of a continuous flow from caster to rolling mill, it's interesting that continuous steelmaking has surfaced again. After a flurry of activity 10 or 15 years ago, most people gave up on the idea of a continuous refining process.

Now, the concept has been revived by Mitsubishi Heavy Industries, Ltd. At Shimizu Seiko Co. in Japan, a continuous system designed for 15 tons an hour has been in operation since 1982.

The system first melts scrap in a cupola. There are then successive desulferizing, refining and grading steps. The need to produce different grades is one of the things that has always made steelmaking a batch operation. Mitsubishi evidently feels chemistry changes can be made without halting the continuous flow.

Mitsubishi's use of a cupola is not entirely novel. A number of U.S. companies tried making iron in hot blast cupolas. Results were not encouraging. Allegheny Ludlum Steel Corp., for one, switched to induction furnaces after many years of cupola operation.

In the rolling mill area, there is a broad new push for better shape control. An ASEA control system has been installed on a cold mill of Republic Steel Corp. at Warren, Ohio. Two Davy McKee unit has been ordered by Bethlehem Steel for Burns Harbor, Ind.

The Bethlehem installation will be tied in with the inflatable rolls of Blaw-Knox Co. (Sumitomo uses the term, variable crown, for its roll.) There is interest in the inflatable roll for both hot and cold mills.

At Burns Harbor, the flatness measuring system of Selective Electronic, Inc., is going on the hot strip mill. This will be used initially just for monitoring; there will be no direct feedback to the mill.

The trend toward scaled-down technology was underlined at AISE when Dravo Engineers, Inc., revealed that it will be supplying the Neuval process of Vallourec. One variation of this process is designed for rolling seamless tube in small quantities—100,000 to 200,000 tons a year.

In Youngstown, Hunt Steel is using a Schloemann planetary mill for elongation and Kocks mill for stretch reduction of seamless. The Hunt plant is designed for 400,000 tons a year, but it follows the mini-mill concept. □

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EFFECTIVE OCTOBER 24, 1983

MATERIALS NEWSFRONT

Price & Production Data

Steel production by districts, thousands of tons (000 omitted)

	Last Week	Two Weeks Ago	Month Ago	Year Ago
North East Coast	183	182	175	116
Buffalo	9	9	30	30
Pittsburgh	229	229	203	137
Youngstown	113	112	101	67
Cleveland	142	143	133	95
Detroit	134	132	96	103
Chicago	493	487	459	333
Cincinnati	105	94	102	64
St. Louis	79	80	76	55
Southern	147	142	152	61
Western	99	88	95	50
U.S. Production	1,733	1,698	1,622	1,111

Source: American Iron & Steel Institute

Lake Superior Ore Prices

51.50% Fe Natural delivered lower Lake ports. Rail transportation, handling and unloading may be charged to the account of the buyer. Coarse ore 80¢ premium.

Pellets (per iron unit natural)..... gross-ton 80.50-86.9*
Old range, non-bessemer ..... gross-ton $32.78
Mesabi, regular-unscreened ..... gross-ton $32.53
Mesabi, non-bessemer.....gross-ton $32.25-32.53**

*80.50¢—Pickands Mather as of 1/27/81.
**86.9¢—U. S. Steel as of 3/15/82. Cleveland-Cliffs as of 2/25/82, Oglebay Norton as of 3/25/82, and Hanna Mining as of 2/26/82.

Steel Production, Composite Prices

(Effective October 24, 1983)

U.S. Steel Production	Last Week	Two Weeks Ago	To Date 1983	To Date 1982
Net tons, in thousands	1,733	1,698	66,655	60,829
Capability Utilization Rate	60.0	58.8	54.7	48.9

Composite Prices	This Week	Week Ago	Month Ago	Year Ago
Finished Steel Base* (¢/lb.—eff. 9/1/83)	26.822	26.822	26.822	25.297
Pig Iron* * (Net ton=2000 lbs.)	$213.00	$213.00	$213.00	$213.00
Scrap No. 1 hvy.* * * (Gross ton=2240 lbs.)	$ 77.83	$ 77.83	$ 77.50	$ 52.17
No. 2 bundles	$ 46.50	$ 46.50	$ 45.50	$ 39.17

Scrap Comparison (Gross Ton)				
No. 1 steel, Pittsburgh .	$ 82.50	$ 82.50	$ 82.50	$ 54.50
No. 1 steel, Philadelphia	71.50	71.50	70.50	55.50
No. 1 steel, Chicago.....	79.50	79.50	79.50	46.50
No. 1 bundles, Detroit..	81.50	81.50	75.50	44.50
Low Phos., Youngstown	84.50	84.50	84.50	56.50
No. 1 mach'y cast., Pgh	74.50	74.50	74.50	64.50
No. 1 mach'y cast., Phila	95.50	95.50	95.50	98.50
No. 1 mach'y cast., Chi..	109.50	109.50	109.50	103.50

*Finished Steel Composite
Weighted index of steel bars, shapes, plates, wire, rails, black pipe, hot and cold rolled sheets and strips.
* *Pig Iron Composite
Based on average prices for basic and foundry pig iron at representative producing points within the U.S.
* * *Steel Scrap Composite
Average of No. 1 hvy. melting steel scrap and No. 2 bundles delivered to consumers at Pittsburgh, Philadelphia and Chicago.

Nonferrous Prices

(Effective October 24, 1983)
Prices obtained in trade based on representative tonnages per gross ton delivered to consumer unless otherwise stated.

Primary Metal Prices

(cents per lb.)	current price	last price	date of change
Aluminum	81.00	76.00-81.00	9/27/83
Copper (C)	68.00-70.00	70.00	10/20/83
Lead	26.00-27.00	25.00-27.00	10/19/83
Magnesium Ingot	138.00	134.00-138.00	6/1/83
Nickel	329.00	350.00	11/25/81
Titanium Sponge	555.00-585.00	555.00	4/29/82
Zinc	46.00-49.00	46.00	10/24/83

ALUMINUM: 99.5%. COPPER (C) — cathode. LEAD: common grade. MAGNESIUM: 99.8% pig. delivered. NICKEL: electro., Port Colborne, Canada. ZINC: high grade.

Antimony, American Laredo, Texas . $2.00
Beryllium-aluminum 5% Be, per lb. contained Be $215.00
Beryllium-copper, per lb. cont. Be $130.00
Beryllium 97% powder 200 ..... $178.00
Bismuth, ton lots ..... $1.80-$2.00
Cadmium, ton lots $1.25
Calcium, ton lots, crown $3.05
Chromium, 99.8% $3.75
Cobalt, 99%, cathode $12.50
Gold per troy oz. $394.50
Indium, dollars per troy oz. ..... $3.20-$3.50
Iridium, dollars per troy oz. $600
Magnesium sticks, 10,000 lbs. $1.91
Mercury, per 76-lb. f.o.b. N.Y. ..$330-$350
Molybdenum, lb. tech. moly oxides, 20 lb. MO can $5.85
Nickel oxide sinter at U.S. points of entry $3.12
Palladium, per troy oz. $140
Platinum, per troy oz. $475
Rhodium, per troy oz. $600.00
Silver ingots, per troy oz. $9.54
Vanadium $4.94
Zirconium sponge ..... $12.00-$17.00
(Per lb. unless otherwise noted)

Straits Tin Price

(U.S. cents per lb, EX-SMELTER, based on daily market in Penang in Malaysian dollars per kilo.)

Oct. 17—583.42 Oct. 20—583.30
Oct. 18—585.54 Oct. 21—582.53
Oct. 19—584.85

Scrap Prices

Brass Mill Scrap

(Cents per lb; over 20,000 lbs. add 1¢ per lb)

	Solids	Turning
Copper	67⅛	63
Yellow brass	60	58
Red brass	63⅜	60½
Comm. bronze	63⅞	61¼
Mang. bronze	60¾	58¼
Free cutting rod ends	57	56

Custom Smelters Scrap

(Cents per lb., carload lots, del. refinery)

No. 1 copper wire	61
No. 2 copper wire	52
Light copper	43

Ingot Makers Scrap

(Cents per lb., carload lots, del. refinery)

No. 1 copper wire	57
No. 2 copper wire	48
Light copper	39
No. 1 composition	54
No. 1 comp. turnings	51
Hvy. yellow brass solids	33
Hvy. yellow brass turnings	28
Radiators	44

Aluminum

New mixed clips	49	—50
Old sheet	47	—48
Old cast	47	—48
Clean dry borings	47	—48

Dealers' Scrap

(Dealers' buying price f.o.b. New York in cents per pound)

Aluminum

Segregated clippings	41	—42
Mixed L.C. clips	35	—36
Old sheets and cast	33	—34
Borings and turnings	24	—25
Duraluminum clippings	29	—30

Copper and Brass

No. 1 copper wire	55	—56
No. 2 copper wire	48	—49
Light copper	44	—45
Radiators	36	—37
No. 1 composition	45	—46
No. 1 composition turn'gs	43	—44
Cocks and faucets	31	—32
Clean heavy yellow brass	29	—30
Brass Pipe	31	—32
New soft brass clippings	44	—45

Lead

Heavy soft lead	8	— 9
Whole batteries	3	— 4
Type metal	15	—16
Electrotype	13	—14

Nickel

Nickel solids	110	—120
Nickel rod ends	110	—120
Nickel sheets, clips	110	—120
Nickel turnings	50	— 60

Zinc

New zinc clippings	15	—16
Old diecast zinc	9	—10

EFFECTIVE OCTOBER 24, 1983

MATERIALS NEWSFRONT

(Effective October 24, 1983) Prices obtained in trade based on representative tonnages per gross ton delivered to consumer unless otherwise stated. Prices are the opinions of *Iron Age* editors and correspondents, based on contacts with dealers, brokers, generators and users in the industry on the effective date listed above.

Ferrous Scrap Prices

Pittsburgh

No. 1 hvy. melting	$ 82.00 to	$ 83.00
No. 2 hvy. melting	72.00 to	73.00
No. 1 dealer bundles	101.00 to	102.00
No. 1 factory bundles (auto)	102.00 to	103.00
No. 2 bundles	51.00 to	52.00
No. 1 busheling	97.00 to	98.00
Machine shop turn.	19.00 to	20.00
Shoveling turnings	44.00 to	45.00
Cast iron borings	43.00 to	44.00
Low phos. punchings plate	99.00 to	100.00
Heavy turnings	72.00 to	73.00
No. 1 RR hvy. melting	99.00 to	100.00
Rails 2 ft. and under	101.00 to	102.00
Scrap rails, random lgth.	91.00 to	92.00
RR specialties	100.00 to	101.00
No. 1 machinery cast	74.00 to	75.00
Cupola cast	67.00 to	68.00
Heavy breakable cast	30.00 to	31.00
Stainless		
18-8 bundles and solids	600.00 to	610.00
18-8 turnings	500.00 to	510.00

Chicago

No. 1 hvy. melting	$ 79.00 to	$ 80.00
No. 2 hvy. melting	72.00 to	73.00
No. 1 dealer bundles	98.00 to	99.00
No. 1 factory bundles (auto)	102.00 to	103.00
No. 2 dealer bundles	44.00 to	45.00
No. 1 busheling	97.00 to	98.00
Shredder scrap	85.00 to	86.00
Machine shop turn.	25.00 to	26.00
Mixed bor. and turn.	26.00 to	27.00
Shoveling turnings	31.00 to	32.00
Cast iron borings	44.00 to	45.00
Low phos. forge crop	99.00 to	100.00
Low phos. punchings plate ¼ in. and heavier	109.00 to	110.00
Low phos. 2 ft. and under	105.00 to	106.00
No. 1 RR hvy. melting	94.00 to	95.00
Scrap rails, random lgth.	81.00 to	82.00
Reroller rails	95.00 to	96.00
Rails, 2 ft. and under	102.00 to	103.00
RR couplers and knuckles	92.00 to	93.00
RR car axles	114.00 to	115.00
No. 1 machinery cast	109.00 to	110.00
Cupola cast	97.00 to	98.00
Stove plate	92.00 to	93.00
Steel car wheels	98.00 to	99.00
Stainless		
18-8 bundles and solids	570.00 to	580.00
18-8 turnings	470.00 to	480.00
430 bundles and solids	135.00 to	140.00
430 turnings	100.00 to	105.00

Philadelphia

No. 1 hvy. melting	$ 70.00 to	$ 73.00
No. 2 hvy. melting	60.00 to	63.00
No. 1 dealer bundles	82.00 to	85.00
No. 2 dealer bundles	42.00 to	45.00
No. 1 busheling	82.00 to	85.00
Shredder scrap	86.00 to	89.00
Machine shop turn.	23.00 to	26.00
Mixed bor. and turn.	23.00 to	26.00
Shoveling turnings	39.00 to	42.00
Low phos. 5 ft. and under	87.00 to	90.00
Low phos. 2 ft. punchings	97.00 to	100.00
Electric furnace bundles	100.00 to	103.00
RR specialties	87.00 to	90.00
Rails, 2 ft. and under	100.00 to	103.00
Cupola cast	65.00 to	68.00
Heavy breakable cast	53.00 to	56.00
No. 1 machinery cast	94.00 to	97.00

Detroit

Broker buying prices per gross ton on cars:

No. 1 hvy. melting	$ 59.00 to	$ 60.00
No. 2 hvy. melting	57.00 to	53.00
No. 1 dealer bundles	81.00 to	82.00
No. 2 bundles	40.00 to	41.00
No. 1 busheling	79.00 to	80.00
Drop forge flashings	55.00 to	56.00
Machine shop turn.	33.00 to	34.00
Mixed borings and turn.	22.00 to	23.00
Shoveling turnings	33.00 to	34.00
Cast iron borings	33.00 to	34.00
Heavy breakable cast	35.00 to	36.00
Mixed cupola cast	51.00 to	52.00
Automobile cast	74.00 to	75.00
Stainless		
18-8 bundles and solids	470.00 to	480.00
18-8 turnings	350.00 to	360.00
430 bundles and solids	115.00 to	125.00

Youngstown

No. 1 hvy. melting	$ 71.00 to	$ 74.00
No. 2 hvy. melting	49.00 to	52.00
No. 1 dealer bundles	87.00 to	90.00
No. 2 dealer bundles	37.00 to	40.00
Machine shop turn.	3.00 to	5.00
Shoveling turnings	7.00 to	10.00
Low phos. plate	83.00 to	86.00
Electric furnace bundles	78.00 to	81.00
Galvanized bundles	70.00 to	73.00

Cleveland

No. 1 hvy. melting	$ 67.00 to	$ 70.00
No. 2 hvy. melting	32.00 to	35.00
No. 1 dealer bundles	85.00 to	88.00
No. 1 factory bundles	97.00 to	100.00
No. 2 bundles	22.00 to	25.00
No. 1 busheling	84.00 to	87.00
Machine shop turn.	1.00 to	4.00
Mixed bor. and turn.	1.00 to	4.00
Shoveling turnings	3.00 to	6.00
Cast iron borings	6.00 to	9.00
Cut structural & plates, 2 ft. and under	100.00 to	103.00
Low phos. punchings plate	100.00 to	103.00
Drop forge flashings	37.00 to	40.00
Foundry steel, 2 ft. & under	57.00 to	60.00
No. 1 RR hvy melting	77.00 to	80.00
Rails, 2 ft. and under	105.00 to	108.00
Rails, 18 in. and under	106.00 to	109.00
Steel axle turnings	67.00 to	70.00
Railroad cast	80.00 to	83.00
No. 1 machinery cast	87.00 to	90.00
Cupola cast	60.00 to	63.00
Stove plate	45.00 to	48.00
Stainless		
18-8 bundles	325.00 to	335.00
18-8 turnings	275.00 to	285.00
430 bundles	80.00 to	85.00

Buffalo

Broker buying prices per gross ton on cars:

No. 1 hvy. melting	$ 58.00 to	$ 59.00
No. 2 hvy. melting	47.00 to	48.00
No. 1 busheling	69.00 to	70.00
No. 1 dealer bundles	69.00 to	70.00
No. 2 bundles	30.00 to	31.00
Machine shop turn.	12.00 to	13.00
Mixed bor. and turn.	13.00 to	14.00
Shoveling turnings	17.00 to	18.00
Cast iron borings	12.00 to	13.00
Low phos. plate	69.00 to	70.00
Structural and plate, 2 ft. and under	70.00 to	71.00
Rails, 2 ft. and under	84.00 to	85.00
Scrap rails, random lgth.	69.00 to	70.00
No. 1 machinery cast	75.00 to	76.00
No. 1 cupola cast	54.00 to	55.00

St. Louis

No. 1 hvy. melting	$ 69.00 to	$ 70.00
No. 2 hvy. melting	58.00 to	59.00
Foundry steel, 2 ft.	57.00 to	58.00
No. 1 dealer bundles	69.00 to	70.00
No. 2 bundles	55.00 to	56.00
Machine shop turn.	17.00 to	18.00
Shoveling turnings	24.00 to	25.00
Cast iron borings	35.00 to	36.00
No. 1 RR hvy. melting	79.00 to	80.00
Rails, random length	76.00 to	77.00
Rails, 18 in. and under	92.00 to	93.00
RR specialties	85.00 to	86.00
Cupola cast	70.00 to	71.00
Heavy breakable cast	48.00 to	49.00
Stove plate	75.00 to	76.00
Cast iron car wheels	49.00 to	50.00
Rerolling rails	97.00 to	98.00
Unstripped motor blocks	57.00 to	58.00

Birmingham

No. 1 heavy melting	$ 67.00 to	$ 68.00
No. 2 heavy melting	64.00 to	65.00
No. 1 dealer bundles	68.00 to	69.00
No. 2 bundles	50.00 to	51.00
No. 1 busheling	68.00 to	69.00
Shredder scrap	94.00 to	95.00
Machine shop. turn.	24.00 to	25.00
Shoveling turnings	32.00 to	33.00
Cast iron borings	33.00 to	34.00
Electric furnace bundles	67.00 to	68.00
Elec. furnace, 3 ft. & under	64.00 to	65.00
Structural and plate, 2 ft.	94.00 to	95.00
Structural and plate, 4 ft.	92.00 to	93.00
No. 1 RR hvy. melting	81.00 to	82.00
Scrap rails, random lgth.	86.00 to	87.00
Rails, 18 in. and under	97.00 to	98.00
Angles and splice bars	94.00 to	95.00
No. 1 cupola cast	87.00 to	88.00
Unstripped motor blocks	64.00 to	65.00

Cincinnati

Brokers buying prices per gross ton on cars:

No. 1 hvy. melting	$ 62.00 to	$ 63.00
No. 2 hvy. melting	55.00 to	56.00
No. 1 dealer bundles	71.00 to	72.00
No. 2 bundles	30.00 to	31.00
Machine shop turn.	7.00 to	8.00
Shoveling turnings	10.00 to	11.00
Cast iron borings	14.00 to	15.00
Low phos. 18 in. and under	89.00 to	90.00
Rails, random length	70.00 to	71.00
Rails, 2 ft. and under	88.00 to	89.00
No. 1 cupola cast	67.00 to	68.00
Heavy breakable cast	34.00 to	35.00
Drop broken cast	80.00 to	81.00

New York

Brokers buying prices per gross ton on cars:

No. 1 hvy. melting	$ 38.00 to	$ 39.00
No. 2 hvy. melting	34.00 to	36.00
No. 2 dealer bundles	22.00 to	23.00
Mixed bor. and turn.	10.00 to	11.00
Machine shop turn.	6.00 to	7.00
Shoveling turnings	13.00 to	14.00
Clean cast. chem. borings	34.00 to	35.00
No. 1 machinery cast	89.00 to	90.00
Mixed yard cast	45.00 to	46.00
Stainless		
18-8 prepared solids	490.00 to	510.00
18-8 turnings	390.00 to	410.00
430 prepared solids	70.00 to	80.00
410 solids	60.00 to	70.00

Boston

Brokers buying prices per gross ton on cars:

No. 1 hvy. melting	$ 45.00 to	$ 47.00
No. 2 hvy. melting	35.00 to	37.00
No. 1 dealer bundles	57.00 to	58.00
No. 2 bundles	31.00 to	33.00
No. 1 busheling	57.00 to	59.00
Shredder scrap	57.00 to	59.00
Machine shop turn.	5.00 to	7.00
Shoveling turnings	9.00 to	11.00
No. 1 machinery cast	95.00 to	100.00
Mixed cupola cast	34.00 to	36.00
Heavy breakable cast	8.00 to	10.00

San Francisco

No. 1 hvy. melting	$ 42.00 to	$ 44.00
No. 2 hvy. melting	34.00 to	36.00
No. 1 dealer bundles	29.00 to	31.00
No. 2 dealer bundles	13.00 to	15.00
Machine shop turn.	6.00 to	8.00
Cast iron borings	6.00 to	8.00
No. 1 cupola cast	73.00 to	75.00

Los Angeles

No. 1 hvy. melting	$ 40.00 to	$ 42.00
No. 2 hvy. melting	29.00 to	31.00
No. 1 dealer bundles	27.00 to	29.00
No. 2 dealer bundles	10.00 to	12.00
Machine shop turn.	6.00 to	8.00
Shoveling turnings	10.00 to	12.00
Cast iron borings	6.00 to	8.00
Elec. furnace, 1 ft. and under (foundry)	73.00 to	75.00
No. 1 cupola cast	75.00 to	77.00

Seattle

No. 1 hvy. melting	$ 61.00 to	$ 63.00
No. 2 hvy. melting	50.00 to	52.00
No. 2 bundles	40.00 to	42.00
No. 1 cupola cast	96.00 to	98.00
Mixed yard cast	83.00 to	85.00

Hamilton, Ont.

Brokers buying price per net ton on cars:

No. 1 heavy melting	$ 60.00
No. 2 heavy melting cut 2 ft. and under	57.00
No. 1 dealer bundles	65.00
No. 2 bundles	35.00
Mixed steel scrap	39.00
Bush. new fact. prep'd.	63.00
Bush. new fact. unprp'd.	55.00
Machine shop turn.	30.00
Short steel turn.	33.00
Mixed bor. and turn.	20.00
Cast scrap	53.00

Houston

Brokers buying prices per gross ton on cars:

No. 1 hvy. melting	$ 79.00 to	$ 80.00
No. 2 hvy. melting	63.00 to	65.00
No. 2 bundles	41.00 to	43.00
Machine shop turn.	21.00 to	22.00
Crushed turnings	43.00 to	45.00
Shredder scrap	79.00 to	80.00
Cut structural plate 2 ft. and under	94.00 to	96.00
Unstripped motor blocks	57.00 to	59.00
Cupola cast	78.00 to	80.00

STEEL PRICES

Codes identify Producers listed in the Key on page 97. (Prices quoted are mill base prices in cents per pound unless otherwise noted and do not reflect extras or surcharges.) N.A. = Not available.

Billets, Blooms, Slabs

(Dollars per net ton)

Carbon Rerolling, Midwest	
W5	$366.00
N4	$366.00
West	
C6	$346.00
Carbon Forging, East	
B3(3), C10, U1	$453.00
R3	$453.00
Midwest	
R3, U1, W5	$453.00
S1	$420.00
C10	$453.00
K2	$453.00
W5	$453.00
West	
B3(2)	$463.00
C6	$453.00
South	
A7	$453.00
Alloy, East	
R3, C10	$492.00
B3	$492.00
Midwest	
W8, W5, C10	$492.00
U1	$492.00
R3	$492.00
S1	$459.00
West	
B3	$502.00
C6	$469.00
South	
A7	$492.00

Piling Sheet Steel

(cents per lb)

Midwest	
U1	26.45

Structurals

Carbon, East	
B3(2)	23.90
U1, J3	23.90
Midwest	
A7	24.15
C20	22.90
W8	22.90
I3, T10, U1, N4	23.90
West	
C6	25.10
U1	24.40
B3(2)	21.65
South	
C16, U1	23.90
T10	22.90
A8	Cmp*
High-Strength, Low Alloy, East	
B3(2)	23.90
U1, J3	23.90
Midwest	
N4	23.90
W8	24.15
U1	23.90
I3	23.90
West	
U1, A7	24.40
B3(2)	21.65
South	
U1, C16	23.90
Wide Flange, Carbon, East	
B3	23.90
U1, A7, J3	23.90
Midwest	
U1	23.90
N4	23.90
I3	23.90
West	
U1	24.40
C6	24.15
South	
A7	24.15

Strip

Hot-Rolled, Carbon, Cut ll Edge—all widths, East	
U1, B3	23.75
J3	22.05
Midwest	
A7, D1	22.05
I4	21.45
J3, D1	22.05
W3	22.05
N4	22.55
W5, S1	23.75
U1, B3	23.75
G2, I3, M2, R3, G3	22.05
West	
K1	20.80
B3	26.55
South	
R3	22.05
Cold-Rolled, Carbon Max. 25%, East	
E4	29.75
R7, S10	29.60
P15	24.80
S7	Cmp*
U1	38.30
D1(1)	Cmp*
B4	33.60
Midwest	
G4	24.80
I4	35.30
W14	22.95
S1, J4	34.05
T4	Cmp*
S1	37.05

*Composite pricing

High-Strength, Hot-Rolled, Low Alloy, Cut Edge & Mill Edge—all widths, (plus extras)†	
Midwest	
M2, G3, R3, W3, I4, J3, G2, I3	22.05
A7	22.05
S1	23.75
West	
K1	22.05
South	
R3	22.05
High-Strength, Cold-Rolled, Low Alloy, Mill Edge, East	
R7	29.00
Midwest	
S1	37.05
Alloy, Hot-Rolled, Midwest (plus extras)†	
S1	24.80
G4	25.80
I4	23.70
Alloy, Cold-Rolled, East	
C11, E4, M8	43.35
R7	32.75
B4	47.25
P15	32.10
Midwest	
I4	41.80
S1	42.30

†Actual weight basis

Sheets

Hot-Rolled, Carbon (18 Ga & Hvyr), East	
B3	23.75
J3	22.05
U1	23.75
Midwest	
A7, G2, G3, I3, M2, R3, W3	22.05
D1	22.05
J3	22.05
I4	21.15
U1, W5, S1, B3	23.75
West	
U1	24.25
K1	22.05
South	
R3	22.05
Cold-Rolled, East, Class I	
B3(2)	28.15
J3	28.15
U1	28.15
Midwest	
I3, G3, R3, M2	28.15
G2, W3, M11	28.15
I4	22.00
J3, A7	28.15
D1	28.15
U1, W5, S1, B3	28.15
West	
U1	28.65
South	
R3	24.65
Galvanized (hot-dipped), East	
B3(2)	30.30
U1	30.30
Midwest	
J3, D1	28.00
I3	28.00
A7, R3, Y1	28.00
G2, W3, M11	28.00
U1, W5, S1	30.30
West	
K1	27.15
U1	30.80
South	
R3	28.00
Enameling, Midwest	
U1, S1	29.85
A7, I3, J3	27.85
Long-Terne, Midwest	
W5	31.85
U1	31.85
R3, A7	29.35

Wire Rod

East	
B3(2)	22.35
U1	22.35
Midwest	
N4	22.35
U1, K2	22.35
West	
A7	22.00
C6	21.45
South	
G7	22.35

Tinplate

Electrolytic Tinplate	
Single Reduced (70 lb)	
East	**per base box**
J3	$26.29
U1	27.74
B3	26.32
Midwest	
U1	$27.74
J3	26.29
M11	26.29
W3	26.29
W5	26.29
West	
K1	$26.79
U1	28.24
South	
U1	$27.74
Double Reduced (55 lb)**	
Midwest	
M11	$21.49
J3	21.49
U1	22.37
W3	21.49
W5	21.49
West	
K1	$21.99
U1	22.87
South	
U1	$22.37
Black Plate	
Single Reduced (75 lb)*	
East	
B3	$23.83
Midwest	
J3	$24.01
M11	24.01
I3, W5	24.01
W3	24.01
U1	25.26
West	
K1	$24.01
U1	25.26
Double Reduced (55 lb)	
East	
B3	$19.70
Midwest	
M11	$18.93
W5	18.93
J3	18.93
W3	18.93
W5	18.93
U1	19.70
West	
U1	$19.70
South	
U1	$19.70

*70 lb—base weight extra 45¢
**50 lb—base weight extra $1.40

Bars

Carbon Steel, Hot-Rolled (Special quality)	
East	
R3, K3	25.80
R5	25.80
B3(3), J3	25.80
U1, C10	25.80
Midwest	
A7	23.95
U1, I3, I4, C20, N4	25.80
R3, T10	25.80
K2	25.80
I3	19.50*
West	
B3	25.80
C6	24.45
South	
A8	20.85
A7	25.80
C16	25.80
Cold-Finished Carbon, East	
A11	22.15
R3	33.75
C21	21.15
J3(4), L2	31.00
C2	23.025
M8, W10, T11, S8	31.00
N1	24.475
R4	22.25
B4	31.00
M1	23.025
B4, C10	31.00
Midwest	
B5, W10, Y1, W8, R3, M9	33.25
J3	31.00
B1	19.80
L2	30.75
N9	31.00
P3	19.85+CMS
W14	22.20
J3(3)	31.00
J3	31.00
West	
B5	34.90
R3	37.15
South	
B5	32.85
J3	34.00
C16	24.40
J3	31.95
Alloy, Hot-Rolled, East	
B3(2), R5, K3, C10, U1	27.95
R3	27.95
J3	27.95
Midwest	
A7, U1, R3	27.95
I3, C10	27.95
I4	24.85
I3	21.00*
West	
B3	27.95
B5	18.50
C6	26.60
South	
A7	24.85
A8	22.00
Alloy, Cold Drawn, East	
L2	35.20
R3, N1, C2	37.90
M1	28.025
R4	25.85
A11	30.50
J3, W10, L2	34.85
T11, S8	34.85
C10	34.85
J3(2)	34.25
Midwest	
R3, C10	37.35
C2	28.275
J3, W10	34.85
P3	22.75
B1	22.70
N9	34.85
L2	34.85
B5	37.10
J3	36.00
J3	34.85
M9	37.10
West	
R3	40.75
South	
J3	35.85
C16	28.00

Plates

Carbon Steel, East	
B3(2), U1	25.75
L4	25.75
P2	25.75
J3	26.75
Midwest	
B3, R3, S1	25.75
I3	24.25
J3, A7	22.80
U1, I4	25.75
R3	26.75
West	
A7, C6, O2	24.25
K1	23.50
U1, B3	25.75
South	
R3	25.75
A7	25.75
U1	25.75
Alloy, East	
B3, J3	33.55
U1, L4	33.55
P2	33.55
J3	34.55
Midwest	
B3	33.55
G2, G3	33.55
I4, U1	33.55
West	
B3	32.05
O2	30.55
K1	31.30
South	
A7	27.55
U1	33.55

Wire

Carbon Steel Wire, East	
B3(2)	27.10
U1	27.70
A11	22.15
Midwest	
U1	27.70
A7, R3	24.80
N4, W7	27.40
K2	24.20
South	
A8	22.85
West	
A7	25.95
C6	24.95

STEEL PRICES

Producer Key
With Principal Offices

A4 American Cladmetals Co., Carnegie, Pa.
A7 Armco Inc., Middletown, Ohio
A8 Atlantic Steel Co., Atlanta, Ga.
A11 Atlantic Wire Co., Branford, Conn.

B1 Baron Drawn Steel Corp., Toledo, Ohio
B3 Bethlehem Steel Corp., Bethlehem, Pa.
B4 Blair Strip Steel Co., New Castle, Pa.
B5 Bliss & Laughlin Steel Co., Harvey, Ill.

C1 Calstrip Corp., Los Angeles
C8 CF&I Steel Corp., Pueblo, Colo.
C10 Copperweld Steel Co., Warren, Ohio
C11 Crucible Divisions, Colt Industries, Pittsburgh, Pa.
C15 G. O. Carlson, Inc., Thorndale, Pa.
C16 Connors Steel Co., Birmingham, Ala.
C20 Calumet Steel Div., Chicago Heights, Ill.
C21 Cumberland Steel Co., Cumberland, Md.

D1 Detroit Strip Div., Cyclops Corp.
D2 Driver Wilbur B., Co., Newark, N. J.
D3 Driver Harris Co., Harrison, N. J.

E3 Enamel Products & Plating Co., McKeesport, Pa.
E4 Elliot Bros. Steel Co., New Castle, Pa.

F1 Firth Sterling, Inc., McKeesport, Pa.

G2 Granite City Steel Co., Granite City, Ill.
G3 Great Lakes Steel Division, National Steel Corp., Ecorse, Mich.
G4 Greer Steel Co., Dover, O.
G5 Green River Steel Corp., Owensboro, Ky.
G6 Gibraltar Steel Corp., Buffalo, N. Y.
G7 Georgetown Steel Corp., Georgetown, S. C.
G8 Guterl Special Steel Corp.

H1 Herculas Drawn Steel Corp., Livonia, Mich.

I2 Ingersoll Steel Div., New Castle, Ind.
I3 Inland Steel Co., Chicago, Ill.
I4 Interlake Steel Corp., Chicago

J2 Jessop Steel Corp., Washington, Pa.
J3 Jones & Laughlin Steel Corp., Pittsburgh
J4 Joslyn Mfg. & Supply Co., Chicago
J5 Judson Steel Corp., Emeryville, Calif.

K1 Kaiser Steel Corp., Fontana, Calif
K2 Keystone Consolidated Industries, Inc.
K3 Kentucky Electric Steel Co., Ashland, Kentucky
K5 Kemco Div., Foote Mineral Co., Keokuk, Iowa

L2 La Salle Steel Co., Chicago
L3 Lone Star Steel Co., Dallas
L4 Lukens Steel Co., Coatesville, Pa.
L5 Litho-Strip Corp., Chicago

M2 McLouth Steel Products Corp.
M4 Mid States Steel & Wire Co., Crawfordsville, Ind.
M8 Mill Strip Products Div., National Steel Service Center, National Steel Corp.
M9 Moltrup Steel Products Co., Beaver Falls, Pa.
M11 Midwest Steel Div., National Steel Corp., Portage, Ind.

N1 Northeast Precision Steel Co., Boston, Mass.
N4 Northwestern Steel & Wire Co., Sterling, Ill.
N6 Northwest Steel Rolling Mills, Seattle, Wash.
N9 Nelsen Steel & Wire Co., Chicago, Ill.
N10 North Star Steel Co., Saint Paul, Minnesota

O2 Oregon Steel Mills, Portland, Ore.

P2 Phoenix Steel Corp., Claymont, Del.
P3 Wyckoff Steel Div., Plymouth, Mich.
P9 Pacific States Steel Co., Niles, Cal
P13 Penn Dixie Steel Corp., Kokomo, Ind.
P14 Pacific Tube Co., Los Angeles
P15 Philadelphia Steel and Wire Corp., Phila.

R3 Republic Steel Corp., Cleveland
R4 Ramco Steel Co., Buffalo, N. Y.
R5 Roblin Steel Corp., Inc., North Tonawanda, N. Y.
R6 Rodney Metals, Inc., New Bedford, Mass.
R7 Rome Strip Steel Co., Rome, N. Y.

S1 Sharon Steel Corp., Sharon, Pa.
S7 Stanley Works, New Britain, Conn.
S8 Superior Drawn Steel Co., Monaca, Pa.
S10 Seneca Steel Service, Buffalo, N. Y.
S16 Southern Precision Steel Co., Gulfport, Miss.

T4 Thomas Steel Strip Co., Warren, O.
T5 Timken Company, Steel Division, Canton, O.
T7 Texas Steel Co., Fort Worth, Tex.
T9 Triumph Electro Corp., Chicago, Ill.
T10 Tennessee Forging Steel Corp., Harriman, Tenn.
T11 Teledyne Columbia-Summerill, Carnegie, Pa.

U1 United States Steel Corp., Pittsburgh, Pa.

W3 Weirton Steel Division, National Steel Corp., Weirton, West Va.
W5 Wheeling-Pittsburgh Steel Corp.
W7 Wilson Steel & Wire Co., Chicago
W10 Wyckoff Steel Div., Ampco-Pittsburgh Corp., Pittsburgh, Pa.
W14 Whittaker Steel Strip Div., Detroit, Mich.

Steel Service Center Prices

Price, Dollars per 100 lb

Cities* / City Delivery Charge*	Sheets			Strip	Plates	Shapes	Bars		Alloy Bars			
	Hot-Rolled (10 gage)	Cold-Rolled (20 gage)	Galvanized (16 gage)	Hot-Rolled Strip	Plates	Standard Structurals	Hot-Rolled (merchant)	Cold Finished	Hot-Rolled 8620 As Rolled	Hot-Rolled 4140 Annealed	Cold-Drawn 8620 As Rolled	Cold-Drawn 4140 Annealed
Atlanta	23.56	29.54	31.00	31.10	22.41	22.00	17.72	31.83	38.37	50.60	69.58	73.19
Baltimore	25.09	29.89	35.62	40.13	23.60	28.11	20.19	37.78	56.15	65.06	71.57	76.32
Birmingham	23.53	28.18	31.94	31.38	21.86	24.70	17.83	30.94	49.31	68.90	68.16	74.43
Boston	28.40	32.27	35.24	45.18	32.96	30.79	21.20	39.88	47.40	51.70	65.08	71.03
Buffalo	26.29	33.95	38.37	40.89	30.94	27.55	18.18	37.91	40.10	47.82	55.33	63.40
Chicago	26.36	31.74	33.90	35.08	23.41	24.31	18.10	32.98	35.94	40.45	48.33	52.53
Cincinnati	25.55	30.37	33.32	33.65	23.70	24.96	15.68	31.85	36.03	39.87	45.03	49.78
Cleveland	27.21	31.56	34.63	33.62	33.62	24.94	16.96	33.48	35.76	39.96	44.02	50.99
Denver	33.50	39.20	38.65	40.27	31.40	31.40	20.43	44.16	45.17	59.08	68.90	72.22
Detroit	26.48	32.27	34.48	34.60	25.26	26.83	18.26	35.08	35.74	40.44	48.73	52.99
Houston	26.10	31.52	35.30	42.46	30.23	30.05	20.65	41.47	45.85	51.86	58.36	64.71
Kansas City	23.76	28.88	33.66	31.59	23.80	28.84	18.15	38.74	45.33	48.63	52.20	59.20
Los Angeles	26.97	33.40	37.56	47.04	32.50	36.17	29.04	41.14	63.36	70.46	76.95	73.22
Memphis	26.12	33.39	33.91	34.55	27.81	29.81	19.47	37.60	45.09	49.96	59.80	69.44
Milwaukee	25.84	31.39	33.41	32.01	24.12	24.56	15.92	30.87	35.95	40.32	45.23	51.68
New York	25.80	33.21	36.97	44.64	30.83	29.48	20.17	41.14	46.00	51.91	61.12	63.63
Philadelphia	28.57	33.81	38.64	46.98	31.37	29.82	20.12	39.84	48.41	53.60	63.90	70.57
Pittsburgh	29.26	35.44	37.92	41.99	32.96	29.51	20.41	32.56	46.10	53.06	60.27	68.22
Portland	25.66	33.27	38.17	31.11	31.04	34.76	27.50	44.85	49.78	57.74	70.44	....
San Francisco	27.75	34.12	38.15	46.06	33.06	35.40	27.00	39.54	60.16	71.07	78.29	85.66
Seattle	27.74	32.32	36.16	40.49	27.49	30.10	28.45	50.60	63.37	71.57	76.28	87.67
Spokane	21.00	30.34	34.28	37.91	33.00	33.75	21.80	43.01	43.20	47.52	....	58.32
St. Louis	26.01	31.88	34.10	33.95	25.58	24.62	16.61	33.48	37.88	42.41	49.84	56.48
St. Paul	25.72	29.51	32.90	36.25	26.33	24.97	17.70	32.93	36.16	41.16	45.76	52.07

Base Quantities. All HR products may be combined for quantity. Hot-rolled sheet, 10 ga x 36 x 96—120; Cold-rolled sheet, 20 ga x 36 x 120; Galv. sheet—16 ga x 36—120; Hot-rolled strip—⅛" x 1"; Plate ¼" x 84/; Shapes—I-Beams 6 x 12.5; Hot-rolled bar—Rounds ¾-2^{15}/$_{16}$; Cold finished bar—C 1018—1" rounds; Alloy bar—Hot-rolled 8620—1¾" round; Cold drawn—1" round; Hot-rolled 4140—1⅝" round; Cold drawn—1" round. Check local supplier for additions or deductions from base.

*Prices at all points include metropolitan delivery charges.

NOTE

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